Cases of Gall-bladder Surgery.

BY

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REPRINTED FROM

The New York Medical Journal

for January 30, 1892.

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CASES OF GALL-BLADDER SURGERY.*

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It is superfluous before this society to-night to review the methods advocated for the relief of diseases of the gall-bladder. These have so recently been written upon by Credé, Tait, Kummell, Senger, Gregg Smith, and others, that it will serve our purpose if such observations are made in connection with the unusual features of the cases here recorded as will be suggestive to operators in this field.

Rules for diagnosis and surgical treatment have still to be definitely written, the result of yet to be accumulated experience. Cases of failure and success have further to be recorded before we are masters of the grave accident of complete biliary obstruction.

It is for this reason, and because of the interest attending this line of surgery, that I ask your attention to the unusual cases of which I will speak.

I may say that in general the experience of most operators is favorable to the accomplishment of surprisingly good results in bad cases of obstructive diseases of the gall-ducts, and this is amply borne out by my own four successful cases.

* Read before the New York Surgical Society, October 14, 1891.

As illustrating the simplest form of operative procedure in cases of obstruction without inflammation, I will first speak of one, done six months ago, and of the ultimate results of which I may now speak with some confidence.

Case I. *Multiple Attacks of Biliary Colic during Four Months; Exhaustion; Cholecystotomy; Removal of Three Large Gall-stones; Immediate Suture of the Gall-bladder; Recovery.*—In April, 1891, Mrs. W., a lady of sixty-four years, came under my care with symptoms of chronic biliary obstruction. She had been for three months under the care of Dr. Partridge, of this city, who had watched her through many severe and constantly recurring attacks of biliary colic.

Her first attack dated to five or six years before. There was then a period of freedom until four months before I saw her, when she was seized with a most severe attack, repeated at intervals of a week or less during the four months following. Each attack was succeeded by moderate jaundice and progressive exhaustion. Though in the earlier intervals she resumed her work, she became too weak during the last month to leave her room.

The usual accompaniment of clay-colored stools and dark bile-stained urine followed each attack.

At last the pain became nearly continuous and she was becoming exhausted. Her skin had a moderate jaundice only, persisting between attacks, though after each severe exacerbation she was quite yellow. I had her removed to a room at the hospital, where poulticing and massage soon relieved the pain and cholæmia, the urine becoming free from bile.

On any attempt to walk, however, pain immediately recurred. There was a moderate tumor the size of an egg at the site of the gall-bladder. A diagnosis of gall-stone obstruction of the cystic duct was made, based on the subsidence of cholæmia with continuance of pain and gall-bladder distention.

I operated April 24th by vertical incision.

The distended and elongated gall-bladder popped out of the wound as soon as the peritonæum was opened, and afforded an excellent opportunity for handling it without soiling the peritoneal cavity.

Three good-sized stones were found, the largest free, the two smaller ones wedged tightly in the cystic duct. The contents of the gall-bladder showed no suppurative change. The stones were, after considerable trouble, worked back into the gall-bladder and removed.

A small gum-elastic bougie was then passed into the common duct and onward far enough to show all obstruction removed.

I then ventured to do the ideal operation of suturing the incised gall-bladder and returning it into the peritoneal cavity. The mucous and peritoneal coats of the collapsed bladder being œdematous and sliding freely on each other, I thought best to make a separate suturing of each. With fine catgut I stitched the muscular layer so as to invert the mucous edges, and then with finest black silk sewed the peritoneal edges.

The abdominal wound was closed, as usual, in separate layers by buried sutures.

The patient made an uninterrupted convalescence, and left the hospital on the twenty-second day in excellent condition, having gained rapidly in weight, having good digestion, normal movements, and being free from pain.

At the present date (six months after operation) she remains in perfect health, is free from pain, and has resumed her work. The abdominal scar is solid.

This case illustrates the feasibility and safety of the so-called "ideal operation" of immediate suture of the wound in the gall-bladder and replacement in the abdomen.

I believe the absence of suppurative inflammation within it is a *sine qua non* of the procedure. The ability to pass a bougie through the unobstructed ducts may be wanting, for the tortuous and pocketed condition of the cystic duct will often entrap the point of a probe so as to make it impossible to pass it through even a pervious canal. In such a case one might fill the gall-bladder with fluid after removing the impacted calculi, and, by pinching the incised wound, observe whether the fluid can by pressure be emptied into

the intestines. If so, I see no reason why the immediate suture should not be resorted to.

It has been observed that a comparatively large sound will pass through a sacculated duct when a small probe will be entrapped. In one case I was unable to pass either a large or a small one, yet the duct was pervious. In another such case I would try fluid, and, if pervious, I would prefer to suture and return to the abdomen.

Case II. *Gall-stone with Suppurating Gall-bladder and Enormous Thickening, simulating Cancer; Cholecystotomy; Recovery.*—In April, 1889, F. M., a young married woman, came under my care for progressive debility and hectic, with a tumor of the right side below the ribs. There had been a vague history of colicky pain before the tumor began. She had not been jaundiced. The tumor had been noticed for five or six months. It was at this time apparently as large as one's fist and quite movable, lying in the direction of the gall-bladder. The mass was tender to pressure, and had been diagnosed as a cancer. Believing it to be an empyema of the gall-bladder, I did laparotomy in the usual site, and, much to my surprise, came upon a solid tumor occupying the exact site of the gall-bladder, and running backward so as to include the ducts in the mass.

Adhesions to the adjacent parts were present.

In spite of its very malignant look, I thought best to make a free incision into it, to relieve, if possible, any pent-up source of sepsis from which I judged her to be suffering. The incision only seemed to confirm our fears. The massive and hard walls were from an inch to an inch and a half thick, and in gross appearance resembled and cut like carcinoma tissue. The remnant of the gall-bladder cavity was a small channel holding only two drachms of muco-purulent fluid. No foreign body could be felt within it.

I therefore established a fistula from it through the abdominal wall, and gave the patient rather an unfavorable prognosis.

During the next few weeks she made an easy convalescence. The sinus, however, did not close, but the mass remained quite as evident to external palpation as before.

Six months afterward she returned to me to see if the sinus could not be closed.

I was surprised to find her in restored health. The sinus secreted copious mucous discharge, but, on probing, it no longer led into an indurated mass. The tumor was no longer to be found. In the sinus was a gall-stone, incrusted with phosphate, the size of a pecan nut. This I removed.

The sinus promptly healed, and some months afterward I had an opportunity of examining her side, and could find no trace of tumefaction. The patient was in robust health.

This extraordinary hyperplasia of the walls of the viscus presented a strikingly deceptive appearance of malignancy. It has been occasionally observed by others, but no explanation has been offered of why it should occur in one case more than in another.

Case III. *Cholecystotomy and Removal of Fifty-three Stones, followed in Six Months by Cholecystectomy and Removal of One Stone more.*—Mrs. L. B., aged twenty-nine years, admitted to St. Luke's, October, 1888, with the following history:

Ten years previously she had her first attack of gall-stone colic. It was followed six months later by another, three months later by another, and afterward almost every month for many years. The intervals ranged from two weeks to three months. The attacks were agonizing, and she had acquired a morphine habit in consequence. Jaundice had supervened on several of the attacks, but she had no chronic jaundice. She had become emaciated physically and discouraged morally.

The region of the gall-bladder was tender on palpation, but no tumor could be felt. Even her corset pressure was painful.

I operated on October 8, 1888, by the vertical incision. The gall-bladder had old, intimate adhesions to the stomach, which being dissected off, I secured its presenting end by two loops of silk stitched through its wall before opening, and evacuated fifty-three small and large calculi. The fluid in the gall-bladder was thin, whitish mucus.

Although no probe could be passed into the common duct nothing could be felt suggestive of stone, either within by probe or without by palpation of the duct. The gall-bladder was stitched in the wound. The patient made a quick recovery and went to her home in Maine with a sinus not yet healed.

Six months later she returned with the sinus still discharging a mucous fluid without bile, and having had moderate recurrences of pain.

I advised reopening the abdomen to explore the cystic duct and remove the atrophied gall-bladder.

No calculus could be felt by palpating or sounding the cystic duct. I therefore dissected the gall-bladder from the liver and from adherent colon and stomach and ligated it close to its junction with the hepatic duct.

On cutting it away, I found that a calculus the size of a pea was locked between two strictures of the duct, and had been the evident cause of continued pain.

The wound being now clean, the abdominal wound was closed at once.

The lady made an immediate recovery of her health, and all pain ceased from that date.

A letter received two days since from her physician states that up to the present date, *three years* since operation, she has remained in perfect health, without the least recurrence of pain.

I was impressed in this case with the difficulty of discerning by the touch of a silver probe the soft surface of a gall-stone. I doubt if one can know in any case whether all stones have been removed except by the touch of the finger within the gall-bladder.

I was also pleased to find the dissection from the surface of the liver not a difficult or serious matter. There had been enough inflammation in past years to cause more intimate union with the liver than the usual cellular tissue. Yet the hæmorrhage was readily controlled by pressure.

The fourth case is one of great interest.

Case IV. *Impaction of Gall-stones in the Hepatic, Cystic, and Common Ducts for Two Years and a Half; Profound Cholæmia; Removal of Gall-stones and Gall-bladder; Recovery.*—A. C., aged thirty-six years, was in excellent health until two years and a half since, when she was first seized with biliary colic and became gradually jaundiced. The colic was soon relieved, but her jaundice increased, and during the entire period has only grown worse and worse. At times she seemed almost black with it, as she expressed it, yet she continued to work at her occupation of dress-making. She lost flesh, and now weighs thirty pounds less than she did. Since the first attack she had indigestion and vomiting frequently, but never of blood. Her stools have been clay-colored and her urine like porter. Two months ago she had a renewal of the biliary colic, which she characterizes as "terrible," but it diminished in one week. She has grown quite unlike her old self, in being subject to nervous attacks, and occasionally has what resembles *petit mal*, losing consciousness for a few moments. She presents the most intense form of jaundice in her face, body, and mucous membranes. The complexion is rather of a blackish-green than yellow, owing to prolonged staining and pigmentation. The liver is very much enlarged, extending two inches below the free border of the ribs. A tumefaction can be felt somewhat deeply at the site of the pylorus, quite hard and suggestive of malignant or inflammatory growth.

During abdominal palpation over this portion, the patient on every occasion was seized with semi-epileptic, semi-hysterical attacks, at first groaning, then lapsing into unconsciousness, with muscular contractions—evidently from pressure near the solar plexus, in a woman profoundly cholæmic. The patient was altogether in a poor condition, with five per cent. of albumin in her urine and hyaline casts. After consultation with my colleagues, I operated, April 13th, under ether. The vertical incision was used. Adhesions of the stomach to the gall-bladder and liver hid it from view, but after careful dissection it was released. Several moderate-sized calculi could be felt through the walls of a rather small gall-bladder, as well as in the cystic duct, and one, as large as a walnut, farther down in the

common duct. The bladder was opened and some viscid bile escaped. The stones being removed from the gall-bladder, it became necessary to incise the cystic duct to release others.

No amount of manipulation availed to move the largest one in the common duct. An attempt was made to crush it externally, but without effect. I therefore split the wall of the common duct in continuation of the cut in the gall-bladder and duct, and found the large stone locked between two strictures of the duct. It being removed, a bougie passed readily into the intestine through the duct.

I then sewed up the cut of the duct with finest black silk, and cut away the gall-bladder and its duct entirely, leaving only the greatly dilated hepatic duct, into which the finger readily passed and from which stones were removed.

The engorged liver poured out large quantities of healthy bile during my manipulation. To control the discharge I introduced a large rubber drain into the hepatic duct, running it upward into the liver a short distance. Over this I passed a larger tube, which terminated at the site of the junction of the ducts, and around it I packed a small iodoform gauze tamponade—the object being to divert all the bile from the liver out of the abdominal wound, and after a few days by removing the inner tube to let the larger one remain to drain the sinus—thus leaving the bile free to travel along the common duct as soon as swelling had subsided.

This device worked admirably, and surprising quantities of bile were poured out during the first two days. Her jaundice soon began to clear perceptibly. The urine cleared at once.

Seidlitz powders were given the second and third day with good results.

At the end of a week she suffered an attack of acute dry pleurisy, from which she slowly recovered.

On the ninth day the first bile tinged her stools. One week later she had a sloughing abscess of her back, from no apparent cause. This retarded her convalescence.

In four weeks she sat up, ate well, and was losing the jaundice, but had a bronzed skin from pigmentation.

At the end of four weeks a fistula only remained in the side,

through which most of her bile escaped. Having seen abundant evidence of bile in the stools, I ventured to have the fistula strapped. Immediate and complete closure and healing followed.

In five weeks her bile was all pursuing its normal course, and she was entirely well, except for color, which was slow to leave. During the summer she has resumed work, and is in perfect health again at the present time, her color having now become perfectly natural.

This case shows that intense cholæmia is not necessarily as fatal an element in operable cases as has been commonly taught. The operative method I have adopted is by the vertical incision over the site of the gall-bladder, and I believe that thus more extensive exploration can be made than by any other method.

The last case I will mention is that of a man with chronic obstructive cholæmia from a small malignant growth just within the outlet of the common duct. This man was for many weeks under medical care in St. Luke's Hospital before being transferred to my service. He was profoundly jaundiced and suffering from an exhausting hectic fever. His liver was enlarged to three inches below the ribs and a considerable tumor of the gall-bladder was perceptible. The most marked feature in the history of his illness was the absence of an initial attack of colic. This in itself was presumptive evidence of malignant obstruction. The distended gall-bladder with grave hectic warranted the diagnosis of empyema of the gall-bladder. The suppurating gall-bladder was found and relieved by the usual operation. No stone or malignant disease was found. The gall-ducts were impassable to small or large probes passed into the gall-bladder. The probability of a stricture or other obstruction at the duodenal end of the common duct led me to search for this through an incision into the duodenum; this I made two inches and a half long and, as I supposed, about four inches and a half from the stomach. Most careful search and palpation failed to reveal the site of entrance of the duct into the duodenum, and the in-

cision was closed by a continuous Lembert suture. Drainage of the suppurating gall-bladder was therefore all that was accomplished. The man survived one week. Post-mortem examination showed the duodenal incision to have been four inches below the site of the duct. A small, soft malignant growth was attached to the wall of the duct just within its lower end, and acted as a valvular stricture. It was scarcely large enough to be perceived by palpation through the intestinal walls at the post-mortem. From this origin, however, multiple secondary deposits of cancer were found in the liver and lung, some of them as large as a hen's egg.

The case illustrates the comparative ease and safety with which the duodenal end of the common duct can be examined by proper incision into the duodenum. Had there been any stone or growth of considerable size in the lower end of the duct, it would certainly have been felt by the finger within the intestine and could have been removed.

In conclusion, I would emphasize the fact that the four cases of obstructive disease from gall-stones here narrated were all progressing to a fatal end and the patients were all restored to perfect health by operation, the time elapsing since operation being from six months to three years.

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